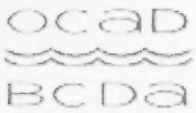
OFFICE OF THE COMMISSIONER FOR AQUACULTURE DEVELOPMENT



"TOWARD AN APPROPRIATE FEDERAL ROLE IN AQUACULTURE"

Results of the Prairies Stakeholder Workshop

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This report has is written in the language used at the workshops

Office of the Commissioner for Aquaculture Development

Canada

TOWARD AN APPROPRIATE FEDERAL ROLE IN AQUACULTURE
OFFICE OF THE COMMISSIONER FOR AQUACULTURE DEVELOPMENT
Report on the Stakeholder Workshops
Prairies - August 9, 2002

The Office of the Commissioner for Aquaculture Development (OCAD) has been directed by the Minister of Fisheries and Oceans to focus efforts upon measures that will lead to full implementation of the 1995 Federal Aquaculture Development Strategy. A key component of this mandate is the creation of a consolidated long-term strategic vision for aquaculture development in Canada and defining a renewed federal role to implement this vision.

Within this context, OCAD organized eleven regional workshops with industry, government and other stakeholders to solicit the views of those groups most directly involved with aquaculture development in Canada. In each region (excepting the Prairie meeting[1]), sessions were organized separately with (1) industry and other stakeholders and (2) government representatives. As a result of this exercise, perspectives on the fundamental elements for successful development of the aquaculture sector in Canada have been compiled, including identification of those groups responsible for delivering each of the fundamental elements. An **element** is defined as a high-level component of the vision that, ultimately, will require strategic focus for further implementation.

At each workshop, an identical process was followed, as outlined below:

- Presentation of background information pertaining to OCAD's mandate
- Consideration of the "Vision Question"
- Brainstorming
- Identification of fundamental elements
- Prioritization exercises
  - Gap Analysis
  - Relational Analysis
  - Resource Allocation

The "Vision Question"

It is 2017 and Canada has grown to realize its potential in aquaculture, a locus of investment that is well-regarded as an environmentally sustainable source of wholesome seafood that provides employment for coastal and rural communities and economic benefits to the Canadian economy in a business climate that is free of public criticism. How did we get to this point?

This report provides interim results from the Prairies regional workshop, held on August 9, 2002. Annex II includes the list of participants to the workshop, and annex I provides a transcription of the elements identified in these sessions. These results reflect the views and opinions of the individuals who participated in the sessions; however, they do not necessarily reflect the perspective of any organizations or associations to which these individuals belong. An analysis of the overall exercise will be available shortly through OCAD's website: http://ocad-bcda.gc.ca

[1] The Prairie workshop consisted of one session between aquaculture industry representatives, other stakeholders and the federal and provincial government representatives.

PRELIMINARY FINDINGS

1. IDENTIFICATION OF ELEMENTS & GAP ANALYSIS

Eight (8) elements were identified in the workshop. These elements, and their definition, are presented in Table 1. For each element, a score is presented to reflect the collective view of the workshop delegates with respect to the current level of progress in relation to its full implementation. The percentage scores reflect the following scale: 0% - No Implementation; 25% - Falling Behind with Implementation; 50% - Neither Gaining nor Falling Behind; 75% - Moving Forward with Implementation; 100% - Full Implementation.

Table 1: Elements & Gap Analysis

Environmental Sustainability 44%	• Development and implementation of science-based standards to enhance sustainability and reduce risk. • Open, transparent and cooperative approach among stakeholders.
Finance 23%	• Funding support for industry development and disaster relief initiatives. • Economic modeling to enhance access to capital.
Marketing 32%	• Strategic approach to improve consumer acceptance and international trade in farmed aquaculture products.
Food Safety 48%	• National recognition program to enhance consumer confidence in aquaculture products and minimize risks.
Regulatory / Policy / Guidelines 39%	• Streamlined and harmonized regulatory and policy framework that is appropriate (enabling) and responsive 'o aquaculture. • Enhanced federal, provincial and industry collaboration. • Developmental policy framework similar to agriculture.
Knowledge and Communications 34%	• Knowledge database re production and economics of aquaculture. • Enhanced communications at three levels: – To consumers / stakeholders, – Between industry and governments, and – Amongst industry.
First Nations 21%	• Enhanced participation of First Nations in aquaculture
Research / Tech. Transfer / New Industry 40%	• Cooperative strategic approach to research aimed at enhanced productivity, profitability and sustainability of aquaculture. • Strategic planning for the Prairies. • Education and awareness re aquaculture.

2. RELATIONAL ANALYSIS (Drivers & Dependents).

This exercise served to define a cause-and-effect relationship between strategic elements. "Drivers" are those elements which, if implemented, will have an effect upon the implementation of other "dependent" elements. A very high score means that the element is a driver (DR), while a very low score means that it is dependent (DP). This does not mean that a dependent element is not important. It does, however, suggest that if two elements are identified as having a similar priority, it would be wise to consider the leveraged influence of the driver on other elements. Table 2 presents the results from the relational analysis exercise.

Table 2: Relational Analysis

ELEMENT	RANK
Environmental Sustainability	4
Finance	5
Marketing	1 DP
Food Safety	3
Regulatory / Policy / Guidelines	8 DR
Knowledge and Communications	6
First Nations	2 DP
Research and Tech. Transfer	7 DR

3. RESOURCE ALLOCATION

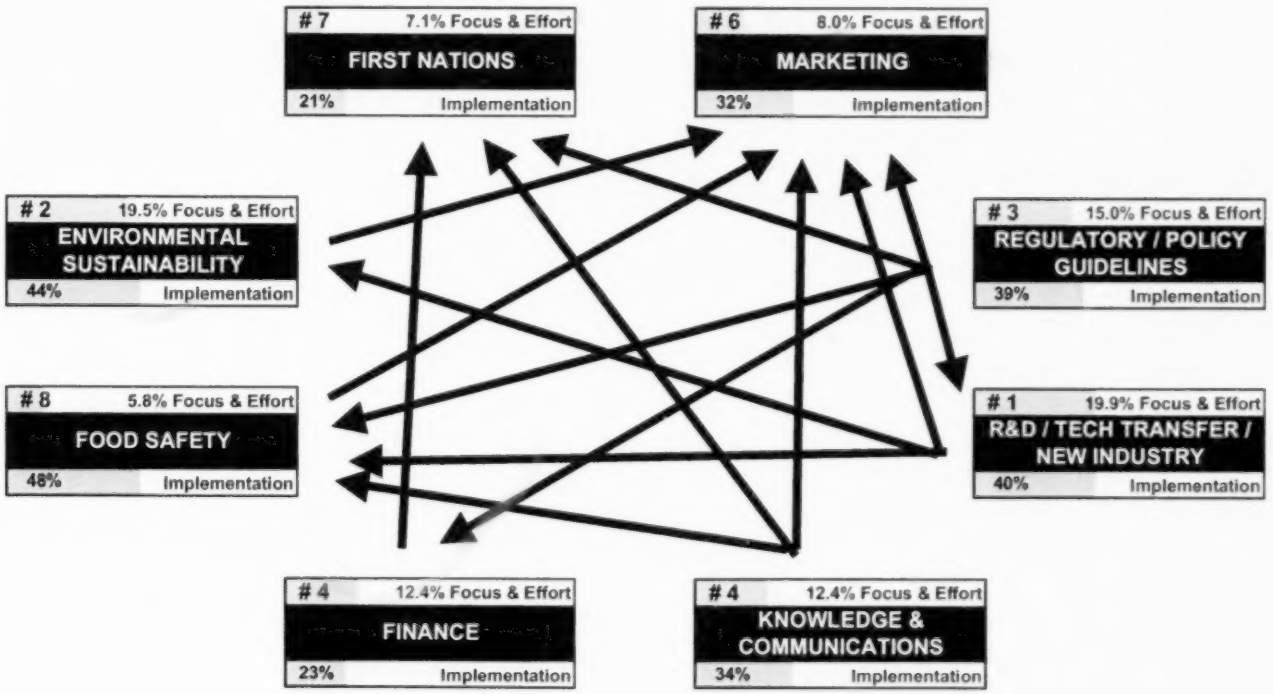
In the resource allocation exercise, each delegate was provided with approximately 50% more resources than the number of elements. For example, if 10 elements were identified, each delegate was provided with 15 resources. The resources represented public sector resources including tax dollars, civil servants and time. Delegates were asked to allocate their resources to those elements that they deemed to be most requiring attention. All of the resources could be allocated to a single element or they could be spread among several or all elements. Results, expressed as a percentage of the total number of resources allocated for each element, are presented in Table 3.

Table 3: Prioritization

ELEMENT	SCORE
1. Research / Tech. Transfer / New Industry	20 %
2. Environmental Sustainability	19 %
3. Regulatory / Policy / Guidelines	15 %
4. Finance	12 %
5. Knowledge and Communications	12 %
6. Marketing	8 %
7. First Nations	7 %
8. Food Safety	6 %
TOTAL	100%

Summary Table 1.

This table is a graphic representation of the eight elements identified in the Prairies stakeholders meeting, along with the results of each exercise (gaps analysis, relational analysis, and resource allocation).



ANNEX I. REGIONAL AQUACULTURE STAKEHOLDER WORKSHOPS
INDUSTRY, OTHER STAKEHOLDERS AND GOVERNMENT PERSPECTIVES
Prairies (Calgary, AB) - August 9, 2002

The following represents the comments of individual participants attending at the workshop. It does not necessarily reflect consensus or agreement among the participants.

ELEMENTS & INITIATIVES (Transcription from Post-It notes)

1. ENVIRONMENTAL SUSTAINABILITY – Development and implementation of science-based standards to enhance sustainability and reduce risk. Open, transparent and cooperative approach among stakeholders.

Federal Initiatives
The federal government has:

- Eliminated the risk of environmental contamination to indigenous fish from fish farms. Minimized diseases, genetic contamination, effluent.
- Put in place a national risk analysis process for different categories of aquaculture operations (land-based / locked; cage culture in both open and closed systems)
- Established effects and compliance monitoring schemes to monitor codes of practice, BMR etc. The monitoring schemes have been *
- Developed a national set of standards for disease monitoring for aquaculture species.
- Established adoption and 'buy in' into Introductions and Transfers Code. Furthermore, the government has worked with the provinces to implement the codes equally among all provinces.
- Guidelines established for wetlands relating to aquaculture, 'wetland environmental credits'.
- Established database on introduction and transfers of new species.

Provincial Initiatives
The provincial government has:

- Monitoring of industry Codes of Practice i.e. effluent, regulations, codes of ethics.
- Provincial Fish health officers have contributed regularly and adopted the disease monitoring standards developed by the federal government.

Industry Initiatives
The industry has:

- Impact of fish farms minimized on environment i.e. – waste management, waste treated, *
- Sustainability and environmental responsibility 'wetland development and maintenance', 'environmental credits' re wetlands
- Would have the best management practices to be in compliance with government regulations. Recognized by national certification – objective, third party review.

Other Initiatives
Other groups have:

- Environmental groups become proponents of prairie aquaculture because a) environmental credits, b) sustainability, c) employment First Nations.
- The education community has developed effluent treatment protocols for all no*
- NGOs members of national advisory group on sustainable aquaculture development

2. FINANCE – Funding support for industry development and disaster relief initiatives. Economic modeling to enhance access to capital.

Federal Initiatives
The federal government has:

- Set up and gives financial support for a fish disease disaster insurance or fund.

- Support to training initiatives for local employment in food production and processing including aquaculture.
- Made money available to provinces to develop infrastructure on the prairies.
- Money set aside for rehabilitation of environmental damage funded.
- Annual budget allocations for aquaculture research projects.
- Invest money to research to address the ecological impacts from aquaculture operations. *agreed as the top priority to enhance aquaculture development.

Provincial Initiatives

The provincial government has:

- Aquaculture recognized as an agricultural industry with full access to income disaster programs and compensation
- Money available for infrastructure for aquaculture on prairies processing, value-added, fish food production on prairies, marketing
- Adequately finances development, management and supervision of the industry
- Made money available to associations to promote fish products and aquaculture awareness.

Industry Initiatives

The industry has:

- Supporting/provides 50% of research funding. Policy in lace that protects research money spent by industry 1-3 year exclusive rights for research results
- Provincial check-off system in place, source of industry funding. $/ fish –associates – research – inspection. (by $/fish, $/pound)
- Industry has a self-funded check-off of monies available for promotion communication and R&D

Other Initiatives

Other groups have:

- The banking industry is aware and supportive of the potential return on investment in the aquaculture industry –business case templates and models available

3. MARKETING – Strategic approach to improve consumer acceptance and international trade in farmed aquaculture products. Marketing the concept of an aquaculture industry on the Prairies.

Federal Initiatives

The federal government has:

- Agriculture and Agri-food Canada has implemented market development strategy for aquaculture (international).

Provincial Initiatives

The provincial government has:

- Sell prairies as ideal place to grow fish, attributes listed in federal government
- Made public a study outlining the benefits of farmed fish, identified problems for industry
- Promoted industry to reclaim coal and gravel pits as aquatic habitat and fish farms.
- Helped a budding aquaculture industry, set up a marketing processing board in each prairie province.
- Provided seed money for the development of value added products and the productions and market of environmentally sustainable species.

Industry Initiatives

The industry has:

- Successfully developed a value added industry to profitability make use of by-products. This will have been supported by government through support in the development of uses for such products.
- Successfully promoted 'farmed' fish to the point where it is the norm and accepted as beef, chicken etc is.

- Developed an association 'seal of approval' to provide a system of checks and balances for operations. Those who do not comply would not be supported by the industry association.
- Promoted fish and seafood consumption across prairies (e.g. Alberta beef promotion)

4. FOOD SAFETY – National recognition program to enhance consumer confidence in aquaculture products and minimize risks.

Federal Initiatives

The federal government has:

- Canada Food Guide includes products of aquaculture as excellent source of nutrition-supported by HACCP and 'Q.C.' programs
- CFIA has a national food safety certification process (stamp of approval) that is applied to all aquaculture products that enter the food chain for internal (National) and external (International) use.

Industry Initiatives

The industry has:

- responded to issues concerning put feed sources and has developed alternatives in the marketplace
- increased it traceability to satisfy consumer concern of product origin

5. REGULATORY/POLICY/GUIDELINES – Streamlined and harmonized regulatory and policy framework that is appropriate (enabling) and responsive to aquaculture. Enhanced federal, provincial and industry collaboration. Developmental policy framework similar to agriculture.

Federal Initiatives

The federal government has:

- Moved to provincial jurisdiction under agriculture (? Moved from Fed- OCAD and DFO to Agriculture and Agri-food Canada)
- A tracking and tracing system has been implemented w/ inspection certification on all products.
- established a 'harmonized' approval process – one window approach – with the province to make the decision-making process more effective and effluent.
- Recognized aquaculturalists as a legitimate user of aquatic resources
- A fish health program exists with an international surveillance program administered federally: import control, domestic surveillance, compensation policy
- Worked with the provinces to set up 'guidelines on introduction of exotic species.' Shortens time taken to decide on acceptable risk for species of fin fish.
- Clear guidelines concerning culture and enhancement.

Provincial Initiatives

The provincial government has:

- Set up an office where future fish farmers can get all provincial and federal applications needed to set up a new aquaculture business 'one-stop source'.
- A stream lined process (one stop application) " new applications, source of general applications.
- Risk assessments on 'new species' complimentary inter-jurisdiction application of information.
- Fish health policies, surveillance systems, implemented-internationally and locally.
- Harmonization of *
- Aquaculture is under provincial jurisdiction under agriculture
- Licensing and legislation. Policies/Licensing/Inspections developed that enable fish farms to establish/operate: guidelines/operating policy, licensing through one body/government dept. 'one stop shopping'

6. KNOWLEDGE AND COMMUNICATION – Knowledge database re production and economics of aquaculture. Enhanced communications at thee levels: 1. To consumers / stakeholders, 2. Between industry and governments, 3. Amongst industry.

Federal Initiatives

The federal government has:

- Advocate for harnessing the knowledge-based resources on the prairies. (Colleges, Universities, government labs).
- Invested time and energy into an effective and efficient communication/education program re aquaculture.
- Developed a National database of information on aquaculture (covering all sectors i.e. disease, risk analysis, business development standards, etc.) That is readily available and shared nationally to all parties.

Provincial Initiatives

The provincial government has:

- Responsible for fisheries and aquaculture implement communication education program re sustainable aquaculture.
- Contributed and input into national database on aquaculture information.

Industry Initiatives

The industry has:

- Taken responsibility as a whole to educate and build consumer confidence in food supply by educating in aquaculture products and safety of food – including environmental sustainability
- More intra-industry communication, especially on the prairies
- Need to have a much better knowledge base – business and fish husbandry

Other Initiatives

Other groups have:

- Education and NGOs have contributed to and regularly input into national database on aquaculture info.
- Groups such as Trout Unlimited and Fish and Game have worked with industry to improve fishing opportunities on the prairies.

7. FIRST NATIONS – Enhanced participation of First Nations in aquaculture.

Federal Initiatives

The federal government has:

- Met with the commercial fishing groups in each province for input as the industry is over 100 years old 80-90% aboriginal in the prairie provinces.
- Must show more input to industry development for first nations.

8. RESEARCH/TECHNOLOGY TRANSFERS/NEW INDUSTRY – Cooperative strategic approach to research aimed at enhanced productivity, profitability and sustainability of aquaculture. Strategic planning for the Prairies; education and awareness re aquaculture.

Federal Initiatives

The federal government has:

- DFO has completed a study identifying public water ideal for growing finfish on the prairies.
- Consumer education that aquaculture products are wholesome and safe.
- DFO has set up a disease testing facility in Prairie Provinces.
- Scientific research a) culture potential – new species, b) fish disease culture – pathogens/preventable measures, new culture technologies, d) value-added products, e) zone of impacts.
- Established value-added industries: fish feed manufacturing, water use and reuse technologies, processing, inexpensive sources of energy (heat) wind, solar, etc.

- Al levels of government and industry have worked together to answer some of the large questions (re uncertainty around industry) surrounding the industry, resulting in a greater acceptability of the industry. Ex: scientific research biophysical assessments.

Provincial Initiatives

The provincial government has:

- Helped industries develop fish feeds on province
- Public education on aquaculture in schools, this will overcome public perception that farmed fish are full of drugs and hormones.

Other Initiatives

Other groups have:

- Farm groups advocate of alternative uses of water and reuse of water.
- More research funding for value-added processing of western crops as aquafeed ingredients – universities, other research.

ANNEX II. LIST OF PARTICIPANTS - PRAIRIES WORKSHOP

NAME	AFFILIATION
Clay Boyd	Alberta Fish Farmers Association
Curt McNaughton	Alberta Fish Farmers Association
Don Hepburn	Canadian Food Inspection Agency
Eric Hutchings	Alberta Agriculture, Food and Rural Develpoment
Jim Gibson	Department of Fisheries and Oceans
Jim Wagner	Alberta Sustainable Resource Development
Ken Gossen	Alberta Agriculture, Food and Rural Develpoment
Ken Huston	Alberta Agriculture, Food and Rural Develpoment
Kevin Callele	Saskatchewan Environment
Lorne Louden	Alberta Fish Farmers Association
Marci Penney	Department of Fisheries and Oceans
Mark McNaughton	Alberta Fish Farmers Association
Murray Drew	University of Saskatchewan
Rachel Archer	Agriculture and Agrifood Canada
Ron Beck	Government of Alberta - Agriculture, Food and Rural Development
Ryan Kay	Federation of Saskatchewan Indian Nations
Stephanie Whitecloud	Federation of Saskatchewan Indian Nations
Terry Dick	University of Manitoba
Terry Schroeder	Alberta Fish Farmers Association
Tony Steiert	Bellemare Industries
Vern McIntosh	Alberta Fish and Game Association